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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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*Ex parte* JAROSLAV GERGIC, RAFAH A. HOSN, JAN KLEINDIENST, STEPHANE H. MAES, THIRUVILWAMALAI V. RAMAN, JAN SEDIVY, and LADISLAV SEREDI

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Appeal 2007-3621
Application 10/007,084
Technology Center 2100

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Decided: May 19, 2008

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*Before* ALLEN R. MACDONALD, JEAN R. HOMERE, and CAROLYN D. THOMAS, *Administrative Patent Judges*.

MACDONALD, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

This is an appeal under 35 U.S.C. §§ 6(b) and 134(a) from a final rejection of claims 1-8, 10-24, and 26-34.

Claims 1, 28, and 33 are exemplary:

1. A computer-implemented method for authoring a speech application, comprising the steps of:

creating one or more reusable VoiceXML dialog components;

creating an associated parameter object for each of the reusable VoiceXML dialog components; and

creating a VoiceXML document comprising code for invoking a reusable VoiceXML dialog component and code for configuring the invoked reusable VoiceXML dialog component using an associated parameter object,

wherein the step of creating a reusable VoiceXML dialog component comprises creating a re-entrant reusable VoiceXML dialog component that allow reusable VoiceXML dialog components to be one of initiated, interrupted, inspected, or resumed with a partially filled result object or state object.[1]

28. A computer-implemented method for implementing a speech application, comprising the steps of:

receiving and parsing a VoiceXML document;

invoking a reusable VoiceXML dialog components using a subdialog element;

instantiating an associated parameter object for configuring the invoked reusable VoiceXML document; and

[1] In our analysis, we refer to this step as the "creating step."

dynamically compiling a grammar for the invoked reusable VoiceXML dialog component.[2]

33. A server-side speech application server, comprising:

a VoiceXML page generation engine for dynamically building a VoiceXML page;

a first database comprising one or more server-side reusable VoiceXML dialog components that are accessible by the VoiceXML page generation engine for generating an intermediate VoiceXML page;

a second database comprising backend data that is accessible by the VoiceXML page generator to insert data in the intermediate VoiceXML page to generate a VoiceXML page that is served to a requesting client.

The Examiner relies upon the following evidence in rejecting the claims on appeal:

| | | |
|---|---|---|
| Sorsa | US 6,424,945 B1 | Jul. 23, 2002 (filed Dec. 15, 1999) |
| Dodrill[3] | US 6,490,564 B1 | Dec. 3, 2002 (filed Feb. 9, 2000) |
| Dodrill[4] | US 6,578,000 B1 | Jun. 10, 2003 (filed Apr. 28, 2000) |

[2] In our analysis, we refer to this step as the "compiling step."
[3] In our analysis, we refer to this reference as "Dodrill '564."
[4] In our analysis, we refer to this reference as "Dodrill '000."

Voice Extensible Markup Language (VoiceXML) version 1.0, w3c Note 05, May 2000.[5]

Claims 1-8, 10-12, and 33-34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over VXML and Dodrill '000.[6]

Claims 13-24 and 26-32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over VXML, Sorsa, and Dodrill '564.[7]

We affirm-in-part.

## FINDINGS OF FACT

The following Findings of Fact (FF) are shown by a preponderance of the evidence.

### *VXML*

1. VXML teaches reusable subdialogs. (Sections 3.1 and 14.4.)
2. VXML teaches that a document calls a subdialog and that the document resumes operation following completion of the subdialog. (*Id.*)
3. VXML teaches that VoiceXML is a type of XML schema. (Section 2.4.)
4. VXML teaches use of the Java format by teaching use of Java Speech Grammar Format (JSGF). (Appendix D.)

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[5] In our analysis, we refer to this reference as "VXML."
[6] In our analysis, we refer to the combination of VXML and Dodrill '000 as the "first combination."
[7] In our analysis, we refer to the combination of VXML, Sorsa, and Dodrill '564 as the "second combination."

*Dodrill '000*

5. Dodrill '000 teaches that an application server creates, modifies, and stores XML documents for later execution. (Col. 7, ll. 40-67.)

*Dodrill '564*

6. Dodrill '564 teaches runtime execution of an extensible markup language (XML). (Col. 5, l. 60 - col. 6, l. 3.)
7. Dodrill '564 teaches that using XML document development tools are preferable to development environments that require compiling because tools can be developed without a user having programming language experience. (*Id.*)
8. Dodrill '564 teaches that a server interacts with a thin-client that uses a Java applet. (Col. 9, ll. 1-11.)

PRINCIPLES OF LAW

Appellants have the burden on appeal to the Board to demonstrate error in the Examiner's position. *See In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006).

> "Section 103 forbids issuance of a patent when 'the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.'"

*KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1734 (2007).

## ANALYSIS

### Claim 1

The Examiner concludes that the first combination renders claim 1 obvious. (Ans. 3-5.) Appellants allege that the Examiner erred in concluding that the first combination renders claim 1 obvious because the combination fails to teach the creating step. (App. Br. 9-11.) Thus, the issue is whether Appellants have shown that the Examiner erred by finding that the first combination teaches the creating step.

*Creating step*

Appellants allege that the first combination fails to teach the creating step because none of the references in the first combination teaches a re-entrant object functionality comprising "a re-entrant reusable VoiceXML dialog component that allow reusable VoiceXML dialog components to be one of initiated, interrupted, inspected, or resumed with a partially filled result object or state object." (App. Br. 9-11.)

We begin our analysis by construing the re-entrant object functionality. Appellants' Specification states that a "re-entrant object or subdialog" supports launch with a partially filled state. (Spec. 53:20-21.) Appellants' Specification does not explicitly define "partially filled state," but gives an example of an object resumed with a partially filled state as able to continue to collect the missing members of its result object. (Spec. 54:20-55:2.) Appellants' Specification states that a "result object may comprise a

description of the full relevant internal state of the object (rather than just the final return values)." (Spec. 54:5-6.) Accordingly, we broadly but reasonably construe the re-entrant object functionality to involve allowing resuming collection of missing members of a result object for which some members have been collected based on an internal state (rather than final result) of the result object.

For the following reasons, we conclude that Appellants have shown that the Examiner erred in finding that the first combination teaches or suggests the re-entrant object functionality of the creating step. VXML teaches that a document calls a subdialog and that the document resumes operation following completion of the subdialog. (FF 2.) However, we find that VXML fails to teach or suggest that the resumed calling document is able to collect missing data of the subdialog and that an internal state of the subdialog is provided, rather than a final result from the subdialog. Dodrill '000 teaches creating or modifying XML documents and storing the XML documents for later execution. (FF 5.) Dodrill '000 does not teach that the missing members of XML document can be determined using the internal state of the XML document. Thus, we conclude that Appellants have shown that the Examiner erred in finding that the first combination teaches or suggests the re-entrant object functionality of the creating step. Therefore, we conclude that Appellants have shown that the Examiner erred in concluding that the first combination renders claim 1 obvious.

Claim 13

The Examiner concludes that the second combination renders claim 13 obvious.[8] (Ans. 9-11.) Appellants allege that neither VXML nor Sorsa teach a re-entrant reusable Voice XML dialog component of claim 13. (App. Br. 14.) Thus, the issue is whether Appellants have shown that the Examiner erred by finding that the second combination teaches or suggests a re-entrant reusable Voice XML dialog component of claim 13.

We construe the re-entrant reusable Voice XML dialog component of claim 13 in the same manner as we construed the re-entrant object functionality of claim 1. For the same reasons presented *supra* with regard to claim 1, we find that VXML does not teach or suggest the re-entrant reusable Voice XML dialog component. The Examiner does not rely on Dodrill '564 or Sorsa to teach or suggest re-entrant reusable Voice XML dialog components. Thus, we find that the second combination does not teach or suggest the re-entrant reusable Voice XML dialog component.

Therefore, we conclude that Appellants have shown that the Examiner erred in concluding that the teachings and suggestions of the second combination renders claim 13 obvious.

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[8] We note that the Examiner refers to portions of Dodrill '000 (col. 7, ll. 45-67) in the rejection of claim 13 (Ans. 10) but does not indicate reliance on Dodrill '000 in a summary of the rejection of claim 13 (Ans. 9).

Claims 28 and 32

The Examiner concludes that the second combination renders claims 28 and 32 obvious. (Ans. 14-19.) Appellants allege that the Examiner erred in concluding that the second combination renders claims 28 and 32 obvious because the second combination fails to teach the compiling step of both claims 28 and 32. (App. Br. 14-15.) Thus, the issue is whether Appellants have shown that the Examiner erred by finding that the second combination teaches the compiling step.

The Examiner construes the compiling step to require compiling at the moment of execution without a preprocessing compilation that is later rendered as an executable and finds that Dodrill '564 teaches the compiling step by teaching execution by an application server in a runtime environment. (Ans. 14-18 and 23-24.)

We begin our analysis by construing the compiling step. Appellants provide no explicit definition of dynamic compiling grammar but provide examples that describe building grammar on the fly (Spec. 26:28-32) and use of a compiler (Spec. 32:5-12). Accordingly, we substantially agree with the Examiner's construction of the compiling step (Ans. 14-18 and 23-24) and broadly but reasonably construe the compiling step to involve compiling grammar when grammar is to be executed.

Dodrill '564 teaches runtime execution of an extensible markup language (XML). (FF 6.) Dodrill '564 teaches that using XML document development tools are preferable to development environments that require

compiling because tools can be developed without a user having programming language experience. (FF 7.) We find that Dodrill '564's teaching of runtime execution of a markup language without a user compiling an application does *not* teach or suggest compiling grammar when grammar is to be used. The Examiner's reliance on Dodrill '564's teaching of avoiding using languages that require compiling as a basis for teaching runtime compiling is misplaced (Ans. 15-18 and 24) because we find that Dodrill '564's teaching of avoiding using languages that require compiling suggests using languages that do not require programming skill rather than teaching runtime compiling. The Examiner does not rely on VXML or Sorsa to teach or suggest the compiling step. Thus, we find that the second combination does not teach the compiling step.

Therefore, we conclude that Appellants have shown that the Examiner erred in concluding that the second combination renders claims 28 and 32 obvious.

Claim 33

The Examiner concludes that the first combination renders claim 33 obvious. (Ans. 7, 8, and 21.) In particular, the Examiner finds that Dodrill '000 teaches a first database comprising "one or more server-side reusable VoiceXML dialog components that are accessible by the VoiceXML page generation engine for generating an intermediate VoiceXML page." (*Id.*) Appellants do not argue that the Examiner erred by combining the teachings

of VXML and Dodrill '000, but argue that the first combination fails to teach or suggest the first data base. (App. Br. 11-12.)

For the following reasons, we agree with the Examiner and find that the first combination teaches the first data base. Dodrill '000 teaches that an application server modifies and stores XML documents for later execution. (FF 5.) We find that Dodrill '000 teaches storing server accessible XML documents. VXML teaches reusable VoiceXML subdialogs. (FF 1.) VXML teaches that VoiceXML is a type of XML. (FF 3.) We find proper a substitution of VoiceXML subdialogs in place of XML documents. *See KSR,* 127 S. Ct. at 1740 (citing *Sakraida*, 425 U.S. 273, 282). Accordingly, we find that the first combination teaches that Dodrill '000's application server accesses and modifies stored VoiceXML subdialogs, instead of XML documents. We find that Dodrill '000's application server accessing and modifying stored VoiceXML subdialogs teaches a VoiceXML page generation engine accessing VoiceXML dialog components and generating an intermediate VoiceXML page. Thus, we find that the first combination teaches the first data base.

Therefore, we conclude that Appellants have not shown that the Examiner erred in concluding that the first combination renders claim 33 obvious.

Claim 34

The Examiner concludes that the first combination renders claim 34 obvious. (Ans. 9 and 22.) In particular, the Examiner finds that VXML

teaches use of Java with VoiceXML grammar elements and thus teaches that a reusable VoiceXML dialog component comprises Java beans and a Voice XML page generation engine comprises Java Server Page (JSP) engine. (*Id.*) Appellants argue that VXML's teaching of Java Speech Grammar Format (JSGF) grammars fails to teach use of the beans and JSP framework. (App. Br. 13.)

VXML teaches use of the Java format by teaching use of JSGF. (FF 4.) Dodrill '564 teaches that a server interacts with a thin-client that uses a Java applet. (FF 8.) We agree with the Examiner that use of Java was well known at the time of the invention (Ans. 9 and 22). Accordingly, at the time of the invention, the use of Java Server Pages engine for the Voice XML page generation engine and reusable Java beans for VoiceXML dialog components were choices well within the grasp of one or ordinary skill in the art and therefore obvious design choices. *See KSR,* 127 S. Ct. at 1740 (citing *Sakraida*, 425 U.S. 273, 282). Therefore, we conclude that Appellants have not shown that the Examiner erred in concluding that the first combination renders claim 34 obvious.

Other Claims

Appellants group dependent claims 2-8, 10-12, 14-24, 26, 27, and 29-31 with their base independent claims. (App. Br. 9.) Accordingly, Appellants have shown that the Examiner erred in concluding that (i) claims 2-8 and 10-12 are obvious over the teachings and suggestions of the first combination for the same reasons presented with regard to independent

claim 1; (ii) claims 14-24, 26, and 27 are obvious over the teachings and suggestions of the second combination for the same reasons presented with regard to independent claim 13; and (iii) claims 29-31 are obvious over the teachings and suggestions of the second combination for the same reasons presented with regard to independent claim 28.

## CONCLUSIONS OF LAW

We conclude that:

(1) On the record, Appellants have shown that the Examiner erred in concluding that claims 1-8 and 10-12 are unpatentable under 35 U.S.C. § 103(a) over VXML and Dodrill '000;

(2) On the record, Appellants have shown that the Examiner erred in concluding that claims 13-24 and 26-32 are unpatentable under 35 U.S.C. § 103(a) over VXML, Sorsa, and Dodrill '564;

(3) Appellants have *not* shown that the Examiner erred in concluding that claims 33 and 34 are unpatentable under 35 U.S.C. § 103(a) over VXML and Dodrill '000;

(4) On the record, claims 1-8, 10-24, and 26-32 have not been shown to be unpatentable; and

(5) Claims 33 and 34 are unpatentable.

## DECISION

The Examiner's rejections of claims 1-8, 10-24, and 26-32 are reversed.

The Examiner's rejections of claims 33 and 34 are affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART

rwk

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